CURRICULUM VITAE

Name: Kwong (Alfred) Y. Tsang, Ph.D.

Citizenship: United States

Education:

1968- BS (Biology), Chinese University of Hong Kong

1974- Ph.D. (Microbiology), Bowling Green State University, Bowling Green, Ohio.

Brief Chronology of Employment:

1974-1976	Instructor, Department of Surgery, Medical College of Ohio, Toledo, Ohio
1976-1979	Assistant Professor, Department of Surgery, Medical College of Ohio, Toledo, Ohio
1979-1981	Instructor, Department of Microbiology and Immunology, Medical University of South Carolina, Charleston, SC
1981-1986	Assistant Professor, Department of Microbiology and Immunology, Medical University of South Carolina, Charleston, SC
1986-1988	Associate Professor, Department of Microbiology and Immunology, Medical University of South Carolina, Charleston, SC
1988-1991	Associate Professor (Tenure), Department of Microbiology and Immunology, Medical University of South Carolina, Charleston, SC
1989-1991	Sabbatical Scientist, Laboratory of Tumor Immunology and Biology, NCI, NIH
1991-1998	Expert Scientist, Laboratory of Tumor Immunology and Biology, NCI, NIH
1998-Present	Staff Scientist, Laboratory of Tumor Immunology and Biology, CCR, NCI, NIH
2000-Present	Head, Cellular Immunology Group, Laboratory of Tumor Immunology and Biology, CCR, NCI, NIH

2008-Present Senior Associate Scientist, Laboratory of Tumor Immunology and Biology, CCR, NCI, NIH

Honors:

New Investigator Award (NCI), 1981-1985

Merrill Chase Award in Cellular Immunology, 1982

Federal Technology Award Recipient NCI, NIH, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009. 2010

NCI, NIH Group Merit Awards: For major contributions to the field of cancer immunotherapy, 2003

NCI, NIH Group Merit Awards: For achievements in the field of therapeutic cancer vaccines, from vaccine design to science-driven clinical studies as an outstanding translational program, 2009.

NCI, NIH, Performance Awards, 2004, 2005, 2006, 2007, 2008, 2009. 2010, 2011

Societies:

American Association for Cancer Research

American Association of Immunologist

American Association for the Advancement of Science

Sigma XI

Miscellaneous:

Certification: Certified by the Nation Registry of Microbiologist, American Academy of Microbiology, as Specialist in Clinical Microbiology (certificate#1218)

Listing: Who's Who in Frontier Science and Technology

Consultation, Study Section:

National Heart Lung and Blood Institute RFA 836-K. "Assay methods to detect the carrier state of AIDS" 1983

National Heart Lung and Blood Institute. Special Project Review Section, 1984

Consultant for RFA-NIH-NHLBI. "Assay Methods to detect the carrier of AIDS" January 6, 1985

Consultant for site visiting team, NIH program project "Special center of research in transfusion medicine" New York Blood Center, IP60HL 33866-01, February 28, 1985

National Heart, Lung and Blood Institute RFA (NIH-88-HL-23-B). "Development of New Screening Tests for Human Retroviruses" 1989

National Heart, Lung and Blood Institute (#2P50HL33811-06) site visit, Stanford University, December 13-15, 1992

Consultant for Source Evaluation Group, Biological Response Modifiers Program, DCT, NCI (MAA No. NCI-CM-37816-64). "Production of clones producing chimeric antibodies and other genetically engineered targeting molecules for the treatment of human malignant disease" October 14, 1993

Consultant for MBRS, NIH, Subcommittee (3 S06GM08211-12S1). "Biomedical Research Initiation at UAPB" March 9, 1994

Consultant for Technical Evaluation Committee, RFP NCI-CB-46207-82. "Immunological Blood Sample Preparation and Assays" April 7, 1994.

Consultant for Technical Evaluation Committee, RFP N02-BC-66202-82. "Production of cytotoxic T cell lines" May 2, 1996

Consultant for Dutch Cancer Society. Grant title, "Toward molecular diagnosis, treatment and prevention of colorectal cancer" July 5, 1999

Consultant for University of Texas Medical Branch, Grant title "Vaccine trial in patients with CEA producing GI Tumors, June 2003

Consultant for Dr. John Yannelli, Department of Microbiology, Immunology and Molecular Genetics, The University of Kentucky. RO1 grant application "Immune response in patients immunized with DC vaccines", 2006

Consultant for British Lung Foundation, UK. Mick Knighton Research Fund. Grant title "Mesothelin-specific T lymphocytes in the pleural fluid-can they be exploited for the immunotherapy of mesothelioma?" 2006

Consultant for British Lung Foundation, UK. June Hancock Fund. Grant title "Tumour antigen specific T cells and immune evasion in malignant pleural mesothelioma" 2006

Consultant for Dr. John Yannelli, Department of Microbiology, Immunology and Molecular Genetics, The University of Kentucky. RO1 grant application "Immune response in patients immunized with DC vaccines", 2009.

Consultant for Dr. Ira Pastan, M.D. Chief, Laboratory of Molecule Biology, CCR, NCI. "CD4 epitopes on PE38", 2008, 2009, 2010, 2011

Research Interests:

Cellular immunotherapy

Tumor immunology

Cancer Vaccines

CTL epitopes

Research Advisor for:

A. Graduate Students and Title of Dissertation

1. Ray Donnelly: "Biochemical and functional analysis of warn reactive antilymphocyte autoantibodies in SLE", 1987
2. Elizabeth Johnson: "Characterization of an antigen reactive to a monoclonal antibody produced to a subset of human peripheral blood lymphocytes with natural killer cell activity", 1987
3. Ron Warren: "Induction of immunity to human osteosarcoma by antiidiotypic antibodies", 1988
4. Dan-Lin Xu: "Chimeric monoclonal antibody to colon carcinoma associated antigen(s)", 1989

B. Mentoring of Postdoctoral, Visiting and Staff Fellows

1. Dr. J.F. Pan (1983-1985)
2. Dr. Satish Pathak (1984-1986)
3. Dr. Stefania Chiofalo (1986-1988)

4. Dr. Elizabeth Johnson (1986-1987)
5. Dr. Ron Q.Warren (1986-1988)
6. Dr. C.F.Qi (1991-1992)
7. Dr. Rosaria DeFilippi (1990-1992)
8. Dr. Hiroki Yamaue (1991-1993)
9. Dr. Yoomie Chung (1993-1999)
10. Konstantin Walmsley (Howard Hugh Research Scholar, 1995-1996)
11. Dr. Pierpaolo Correale (1994-1998)
12. Dr. Hiroshi Terasawa (1998-2000)
13. Dr. Philip Arlen (1998-2000)
14. Dr. H. Kuwahara (2000-2001)
15. Dr. Ming-Zhu Zhu (1994-2001)
16. Dr. Mehesh Seetharam (2002-2003)
17. Dr. Claudia Palena (2001-2006)
18. Dr. Patricia Beetham (2002-2006)
19. Dr. Junko Yokokawa (2003-2006)
20. Dr. Cinzia Remondo (2006-2008)
21. Dr. Vittore Cereda (2006-2009)
22. Dr. Matteo Vergati (2008-2010)
23. Dr. Macy Huen (2008-2010)
24. Dr. Caroline Jochems (2008-present)
25. Dr. Chiara Intrivici (2009-present)
26. Dr. Joan Tucker (2011-present)

Faculties:

Immunology Faculty, NCI, NIH, 2000-present

Vaccine Working Group, NCI, NIH, 2000-present

Molecular Targeting Faculty, NCI, NIH, 2001-present

Cytokine Interest Group, NCI, NIH, 2000-present

Flow Cytometry Interest Group, NIH, 2003-present.

Editor of Journal:

Journal of Biomedicine and Biotechnology: Special Issue on Immunologic Monitoring of Cellular Immune Responses in Cancer Vaccine Therapy (2011)

Review for Journals:

Cancer Research
Scandinavian Journal of Immunology
Cancer Immunology Immunotherapy
Clinical Immunology and Immunopathology
Journal of Clinical Immunology
JNCI
Journal of Immunotherapy
Clinical Cancer Research
International Journal of Cancer

Patents:

U.S. Patent No. 6,319,496. U.S. Patent No. 6,001,349. PTC/US96/02156. Japanese Patent No. 4059920. Australian Patent No. 711899. (E-200-90/3) (Schlom, Tsang, Panicali) "Generation of human cytotoxic T-cells specific for carcinoma self-associated antigens and uses thereof." European Patent No. 0811062 granted 7/16/09. Prosecuted in national stage in Canada.

New U.S. Patent No. 7,547,773 issued 6/8/09. U.S. Patent No. 6,946,133. PCT/US97/04454. U.S. Divisional Application No. 11/606,929. European Patent No. 088456. (E-062-96) (Schlom, Tsang, Zaremba) "Prostate specific antigen oligo-epitope peptide." Continuing Patent Application No. 12/479,292 filed 6/5/09.

U.S. Patent No. 7,247,615. PCT/US2002/37805. Japanese Patent No. 4364643 issued 8/28/09. Australian Patent No. 2002352913. New European Pat No. 1461073 granted 1/6/10. (E-124-01) (Schlom, Panicali, Tsang) "Peptide Agonists of Prostate Specific Antigen and uses thereof." In national stage in Canada.

PCT/US2004/41921. U.S. Application No. 10/582,702. Canadian Application No. 2490659. Australian Application No. 2003248744 and 2004299457. Jap. Application No. 2006-544419. (E-321-03) (Schlom, Tsang) "A human cytotoxic T lymphocyte epitope and its agonist epitope from the non-variable number of tandem repeat sequence of human tumor associated antigen MUC-1." In national stage in U.S., Canada, Australia and Japan.

PCT/US2004/038643. U.S. Application No. 10/579,007. (E-087-05) (Panicali, Mazzara, Gritz, Schlom, Hodge, Tsang) "Custom Vectors for Treating and Preventing Pancreatic Cancer." In national phase in U.S., Canada, Japan, and Europe.

PCT/US2004/037810. (E-088-05) (Panicali, Mazzara, Gritz, Schlom, Hodge, Tsang) "System for treating and preventing breast cancer." Therion Biologics Corporation. In national phase in U.S., Canada, Europe, Australia, Japan and Hong Kong.

PCT/US2007/004603. U.S. Application No. 12/280,534. Australian Application No. 2007221255. European Application No. 07751371.1. Canadian Application No. 2,642,994. (E-104-2006) (Pastan, Schlom, Tsang) "Immunogenic peptides and methods of use. [PAGE-4]". In National Phase in U.S., Canada, Australia, Europe.

U.S. Provisional Application No. 61/170,900. (E-042-09) "A human cytolytic T lymphocyte epitope from the human tumor-associated antigen (TAA) NGEP (New gene expressed in prostate.)" (Schlom, Tsang, Pastan). PCT application will be filed by 4/20/10. U.S. Provisional Application filed 4/20/09.

Continuing Education: (Last 4 years)

"Affymetrix genechip training" Microarray Facility, ATC, NCI, NIH. September 12-13, 2006.

"Multicolor Flow Cytometry: Beyond the Basics" Becton Dickinson BioScience, July, 2010.

"LSR II Training" Becton Dickinson BioSciences. October, 2010

BIBLIOGRAPHY:

Publications:

1. Singh I, Tsang KY and Ludwig GD. Alternations in the mitochondria of human osteosarcoma cells with glucocorticoids. Cancer Res. 34:2946-2952, 1974.
2. Singh I, Tsang KY and Ludwig GD. Alkaline phosphatase and utrastructural alterations in human osteosarcoma cells in tissue culture. Europ Surg Res. 6:247-263, 1974.
3. Singh I and Tsang KY. An *in vitro* production of bone specific alkaline phosphatase. Exp Cell Res. 5:248-264, 1975.
4. Singh I, Tsang KY and Blakemore WS. Isolation and partial purification of plasma membrane-associated antigens from human osteosarcoma (TE-85) cells in tissue culture. Cancer Res. 36:4130-4136, 1976.
5. Singh I, Hatheway JM, Tsang KY, Blakemore WS and McAllister RM. An animal model for human osteosarcoma. Surgery 81:168-175, 1977.
6. Singh I, Tsang KY, and Blakemore WS. Immunologic studies in contacts of osteosarcoma in humans and animals. Nature 265:541-542, 1977.
7. Singh I, Tsang KY, Blakemore WS. Effect of xenogeneic immune RNA on normal human lymphocytes against human osteosarcoma cells in vitro. J Natl Cancer Inst. 58:505-510, 1977.
8. Tsang KY and Hann WD. Activation of Epstein-Barr virus in hybrid cells. J Natl. Cancer Inst. 58:1295-1301, 1977.
9. Singh I, Tsang KY and Blakemore WS. Placenta-like alkaline phosphatases from human osteosarcoma (L.M.) cells. Cancer Res. 38:193-198, 1978.
10. Tsang KY, Singh I and Blakemore WS. In vitro stimulation of normal human lymphocytes with xenogeneic RNA against human osteosarcoma cells. Micron 9:15-16, 1978.

11. Tsang KY, Singh I and Blakemore WS. Detection of circulating immune complexes in human osteosarcoma. Surg Forum 29:560-561, 1978.

12. Tsang KY and Singh I. Circulating immune complexes in human osteosarcoma. J Natl Cancer Inst. 62:743-746, 1979.

13. Tsang KY and Singh I. Effect of hyperthermia on osteosarcoma in Syrian hamsters. Micron 10:59-60, 1979.

14. Singh I, Tsang KY and Blakemore WS. A model for human osteosarcoma in hamsters. Clin Orth Rel Res. 144:305-310, 1979.

15. Tsang KY, Singh I and Blakemore WS. Human bone-specific alkaline phosphatases in an animal model of human osteosarcoma. Surg Forum 30:500-502, 1979.

16. Tsang KY, Singh I, Gnagy M and Tanski D. Abnormal monocyte chemotaxis in hamsters with human osteosarcoma. Micron 10:227-228, 1979.

17. Tsang KY and Singh I. Reaction of immune complexes with human osteosarcoma cell culture (TE-85): Immunoferritin electron microscopy. Micron 11:19-20, 1980.

18. Singh I, Tsang KY and Blakemore WS. Serologic analysis of tumor-associated surface antigens on human osteosarcoma cells. 161-180. Serologic analysis of human cancer antigen. Edited by SA Rosenberg, Academic Press, 1980.

19. Singh I, Tsang KY and Blakemore WS. Radioimmunoassay to detect human osteosarcoma-associated surface antigens. 669-672. Serologic Analysis of Human Cancer Antigens. Edit by SA Rosenberg, Academic Press, 1980.

20. Tsang KY and Fudenberg HH. In vitro and in vivo study of isoprinosine (ISO) on immune responses in an animal model of human osteosarcoma. Inter J Immunopharmacol. 2:196, 1980.

21. Tsang KY, Pai GS and Fudenberg HH. Characterization of newly established human osteosarcoma cell line LM-1. In Vitro 17:308-314, 1981.

22. Tsang KY, Fudenberg HH and Gnagy M. Osteosarcoma patients: Isolation of serum antibodies by affinity chromatography. J Natl Cancer Inst. 67:1183-1189, 1981.

23. Tsang KY and Fudenberg HH. Isoprinosine as an immunopotentiator in an animal model of human osteosarcoma. Inter J Immunopharmacol. 3:383-389, 1981.
24. Tsang KY, Gnagy MJ, Yamamura Y and Fudenberg HH. Detection of natural killer cell-mediated cytotoxicity in hamsters using Raji target cells. Clin Immunol Immunopathol. 21:332-340, 1981.
25. Tsang KY, Hynes JB and Fudenberg HH. Effects of 5,8-dideazoisofolic acid (IAHQ) on human tumor cell cultures and on normal and tumor bearing animals. Chemotherapy 28:276-282, 1982.
26. Tsang KY, Fudenberg HH and Gnagy MJ. Interspecies transfer of tumor-specific cell mediated immunity from rabbits to hamsters by diayzable leukocytes extracts. Med Ped Oncol. 10:103, 1982.
27. Yamamura Y, Tsang KY and Fudenberg HH. Immunology and cancer. In: Diagnosis and Management of Cancer (DW Nixon, ed.), pp.280-295, Addison-Ewesley, Menlo Park, California, 1982.
28. Panday JP, Shannon BT, Tsang KY, Fudenberg HH and Camblin JG. Heterozygosity at Gm loci associated with humoral immunity to osteosarcoma. J Exp Med. 155:1228-1232, 1982.
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30. Tsang KY, Fudenberg HH, Sun DC, Pai GS, Bishop LR and Sager S. Cultivation of human osteosarcoma cell lines in serum free hormone supplemented medium. In vitro 19:515-521, 1983.
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32. Tsang KY, Fudenberg HH and Wilson GB. Osteosarcoma-specific dialyzable extracts: Prophylaxis post-surgery in animal model of human osteosarcoma. In:

Immunobiology of Transfer Factor (CH Kirkpatrick, HS Lawrence and DR Berger, eds.), Academic Press, pp. 157-174, 1983.

33. Tsang KY, Fudenberg HH, Pan JF, Gnagy MJ and Bristow CB. An in vitro study on the effects of isoprinosine on immune responses in cancer patients. Int J Pharmacol. 5:481-490, 1983.
34. Tsang KY, Fudenberg HH and Gnagy MJ. Restoration of immune responses of aging hamsters by treatment with isoprinosine. J Clin Invest. 71:1750-1755, 1983.
35. Tsang KY, Hynes JG, Fudenberg HH and Pan JF. Effects of three new folate antagonists on human breast adenocarcinoma cells in vitro and on immune responses in vivo. Chemotherapy 30:61-68, 1984.
36. Tsang KY, Pan JF and Fudenberg HH. Production of antibody to human osteosarcoma associated antigens by continuous human lymphoblastoid cell lines. Immunol Letters 7:267-272, 1984.
37. Tsang KY, Fudenberg HH and Galbraith GMP. Letter to the editor, In vitro augmentation of interleukin-2 production and TAC antigen marker positive lymphocytes in patients with AIDS. N Eng J Med. 310:987, 1984.
38. Tsang KY and Fudenberg HH. Restoration of immune responses in aging models. In: Stress, Immunity and Aging. Marcel Dekker Inc., pp.257-270, 1984.
39. Tsang KY, Fidenberg HH, Hoehler FK and Hadden JW. Immunostimulating compounds: Isoprinosine and NTP-15392. In: Immune Modulation Agents and Their Mechanism. Marcel Dekker Inc., pp. 79-97, 1984.
40. Tsang KY and Fudenberg HH. Effect of isoprinosine (ISO) on the interleukin-2 production in vitro in patients with acquired immunodeficiency syndrome (AIDS). J Leuk Biol. 36:232, 1984.
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42. Fudenberg HH, Wilson GB and Tsang KY. Evaluation of "Transfer Factor" potency and prediction of clinical responses. In: Immunomodulation: New

Frontiers and Advances (HH Fudenberg, HD Whitten and F Ambrogi, eds.) Plenum Press, pp.115-130, 1984.

43. Tsang KY, Pan JF and Fudenberg HH. In vitro restoration of immune responses in aging human by treatment with isoprinosine. Int J Immunopharmacol. 7:199-206, 1985.
44. Tsang KY, Fudenberg HH and Pan JF. Transfer of osteosarcoma specific cell-mediated immunity in hamsters by rabbit dialyzable leukocyte extracts. Cell Immunol. 90:295-302, 1985.
45. Fudenberg HH and Tsang KY. In utero osteosarcoma tolerized hamsters: A model for human cancer and immunocyte differentiation. In: Theories and Models in Cellular Transformation (L Santi and Luciaano Zardi, eds.), Academic Press, pp. 23-44, 1985.
46. Tsang KY, Fudenberg HH, Galbraith GMP, Donnelly RP, Bishop LR and Koopmann WR. Partial restoration of impaired interleukin-2 production and RAC antigen (putative IL-2 receptor) expression in AIDS patients with isoprinosine treatment in vitro. J Clin Invest. 75:1538-1544, 1985.
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50. Tsang KY and Fudenberg HH. Transfer factor and other T cell derived factors. Springer Seminars in Immunopathology (P.Miescher GH, Muller-Eberhard, eds), 9:19-33, 1986.
51. Tsang KY, Donelly RP, Galbraith GMP and Fudenberg HH. Isoprinosine effects on IL-2 production in acquired immune deficiency syndrome (AIDS). Int J Immunopharmacol. 8:437-441, 1986.

52. Tsang KY, Boutin B, Pathak SK, Donnelly RP, Koopmann WR, Jr., Fleck R, Miribel L and Arnaud P. Effect of isoprinosine of sialylaation of IL-2. Immunol Letters 12:195-200, 1986.

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63. Warren RQ, Johnson EA, Donnelly RP, LaVia M and Tsang KY. Analysis of auto-reactive antibodies in AIDS, ARC and healthy homosexuals. Clin Exp Immunol.73:168-173, 1988.

64. Tsang KY, Johnson EA and LaVia MF. Anti-p24 antibody reactivity in the acquired immunodeficiency syndrome (AIDS)-related complex treated with isoprinosine. Ann Int. Med. 109:595, 1988.

65. Tsang KY, and LaVia MF. Anti-idiotypic antibodies to anti-HIV p24 monoclonal antibody. In The Molecular Biology of Human Disease Vol. I, Ellis Horwood Limited, pp.124-127, 1989.

66. Warren RQ and Tsang KY. Induction of immunity to a human osteosarcoma tumor associated antigen in mice using anti-idiotypic antibodies. Clin Immunol Immunopath. 56:334-343, 1990.

67. Xu D and Tsang KY. Nucleotide sequence of a new Balb/c mouse kappa light chain variable region gene. Nucleic Acids Res. 18:1912, 1990.

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69. Tsang KY, Finch MD, Primus FJ and Schlom J. Human rIL-6 enhances antibodies-dependent cellular cytotoxicity of human tumor cell mediated by human peripheral blood mononuclear cells. Cancer Immunol Immunother. 34:9-16, 1991.

70. Arlen M, Tsang KY, Bartal A, Wolf J and Sarc O. Monoclonal antibodies to immunoreactive tumor associated antigen (TAA) from human colon carcinoma. Anti Immunoconj Radiopatharma. 4:895-898, 1991.

71. Tsang KY. AIDS and immunologic mechanisms in pregnancy. In: Principals of Medical Therapy in Pregnancy. N Gleicher ed., Appleton and Lange. P385-387, 1992.

72. Tsang KY, Kashmiri SVS, DeFilippi R, Qi CF, Calvo B, Shu L, Nieroda CA, Greiner JW and Schlom J. T cell line engineered to secrete chimeric monoclonal antibody. J Immunother. 13-143-152, 1993.

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74. Arlen M, Hollinshead AC and Tsang KY. Identification and characterization of a colon tumor-associated antigen. Ann New York Acad Sci.: Specific Immunother, Cancer Vaccine: Identification and characterization of a colon tumor-associated antigen. 690:374-375, 1993.

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76. Yamaue H, Kashmiri SVS, DeFilippi R, Nieroda C, Yannelli JR, Tsang KY and Schlom J. Enhanced interleukin-2 production in human tumor-infiltrating lymphocytes engineered by 3'-truncated interleukin-2 gene. J Immunother. 16:262-274, 1994.

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79. Tsang KY, Zaremba S, Nieroda CA, Zhu MZ, Hamilton JM and Schlom J. Generation of human cytotoxic T-cells specific for human carcinoembryonic antigen (CEA) epitopes from patients immunized with recombinant vaccinia-CEA (rV-CEA) vaccine. J Ntl Cancer Inst. 87:982-990, 1995.

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81. Abrams SI, Hand PH, Tsang KY and Schlom J. Mutant ras epitopes as targets for cancer vaccines. Semin Oncol. 23:118-134, 1996.

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83. Cole DJ, Wilson BS, Baron PL, O'Brien P, Reed C, Tsang KY and Schlom J. Phase I study of recombinant CEA vaccinia virus vaccine with post vaccination CEA peptide challenge. Hum Gene Ther. 7:1381-1394, 1996.

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86. Tsang KY, Zhu MZ, Nierida VA, Correale P, Zaremba S, Hamilton JM, Cole D, Lam C and Schlom J. Phenotypic stability of a cytotoxic T-cell line derived against an immunodominant epitope of human carcinoembryonic antigen. Clin Cancer Res. 3:2439-2449, 1997.

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88. Correale P, Walmsley K, Nieroda C, Zaremba S, Zhu MZ, Schlom J and Tsang KY. In vitro generation of human cytotoxic T lymphocytes specific for peptides derived from prostate-specific antigen. J Ntl Cancer Inst. 89:293-300, 1997.

89. Correale P, Walmsley K, Zaremba S, Zhu MZ, Schlom J and Tsang KY. Generation of human cytotoxic T lymphocyte line directed against prostate-specific antigen (PSA) employing a PSA oligoepitope peptide. J Immunol. 161:3186-3194, 1998.

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recombinant vaccine that expresses human carcinoembryonic antigen. J Clin Oncol. 17:332-337, 1999.

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Invited Talks (Last eight years)

1. "Induction of cytotoxic T lymphocytes by tumor antigen peptides" Symposium of Cancer Vaccine. Department of Surgery, Wakayama Medical University, Wakayama, Japan. October, 2002.
2. "T cell activation in carcinoma-associated antigen directed cancer vaccines" 20th International Conference on Human Tumor Markers, Siena, Italy. June 2003.
3. "T-cell activation in carcinoma-associated antigen directed cancer vaccines" Institut Curie, Department of Oncology, Paris, France. June, 2003.
4. "Activation of human T-cells specific to CEA and MUC-1 via PANVAC vectors" International Workshop on Cancer Vaccines. Siena, Italy. June, 2004.
5. "T-cell activation with carcinoma-associated antigen peptide epitopes and agonist epitopes" Symposium of Cancer Vaccine. Department of Surgery, Wakayama Medical University, Wakayama, Japan. November, 2004.
6. "Activation of human T lymphocytes against defined epitopes and agonist epitopes of human tumor associated antigens:Enhances activation of human T-cells via vector-mediated hyperexpression of costimulatory molecules in antigen presenting cells" The 17th Annual congress of Japan Society for Biological Therapy , Fukuoka, Japan. November, 2004.
7. "Identification of novel human cytotoxic T lymphocyte epitopes and their agonist epitopes of mesothelin" Laboratory of Molecule Biology, CCR, NCI, NIH. February, 2005.
8. "CTL epitopes of Mesothelin" Institut Curie, Department of Oncology, Paris, France. June, 2005.

9. "Identification of novel human cytotoxic T lymphocyte epitopes and their agonist epitopes of mesothelin" Universita' Degli Studidi Di Siena, Dipartimento di Farmacologia, Siena, Italy June, 2005.
10. "Identification of cytotoxic T lymphocyte epitopes of a novel target for vaccine therapy". Co-Chairman of the Meeting. The Second International Cancer Vaccine Meeting. Siena, Italy December 8-10, 2006.
11. "Immunotherapy of human carcinomas" Invited by Professor Shimon Sakaguchi, Department of Experimental Pathology, Institute for Frontier Medical Sciences, Kyoto University, Kyoto, Japan. June 22, 2007.
12. "Enhanced levels and functionality of CD4+CD25highFoxP3+ regulatory T cells in the peripherial blood of prostate cancer patients" Invited by Professor Yasuyuki Sugiyama, Department of Surgery, Mizonokuchi Hospital, Teikyo University School of Medicine, Tokyo, Japan. June 18, 2007.
13. "Regulatory T cells in patients with prostate cancer" Invited by Dr. Takuya Tsunoda, OncoTherapy Science, Inc. Tokyo, Japan. June 17, 2007.
14. "Enhanced functionality of CD4+CD25highFoxP3+ regulatory T cells in the peripherial blood of prostate cancer patients". Invited by Professor Yusukem Nakamura, Director, Human Genome Center, Laboratory of Molecular Medicine, Institute of Medical Science, The University of Tokyo. Tokyo, Japan. June 17, 2007.
15. "Immune responses to carcinoma patients to tumor-associated antigen" Invited by Professor Hiromasa Ohira, M.D., Ph.D. Chairman, Dept. of Internal Med. 2. Fukushima Medical University School of Medicine, Fukushima, Japan. May 20, 2008.
16. "Immune responses to carcinoma patients to tumor-associated antigen" Invited by Dr. Gil Mor, Department of Obstetrics and Gynecology, Yale University, New Haven, CT. June 18, 2008.

17. "New gene expressed in prostate (NGEP): activation of human dendritic cells and NGEP-specific T cells". Invited by Dr. Takuya Tsunoda, OncoTherapy Science, Inc. Tokyo, Japan. May 19, 2009.
18. "Discussion of circulating regulatory T cells in prostate cancer patients". Invited by Professor Shimon Sakaguchi, Department of Experimental Pathology, Institute for Frontier Medical Sciences, Kyoto University, Kyoto, Japan. May 20, 2009.
19. "Circulatiog regulatory T-cell function and overall survival in metastatic prostate cancer patients treated with a poxviral-based vaccine". Cancer Vaccine Meeting. Invited by Professor Guido Francici,M.D. Chairman, Section of Medical Oncology, Department of Human Pathology and Oncology, Siena University School of Medicine, Siena, Italy. December 14, 2009.